## COLLABORATIVE VIDEO DELIVERY OVER HETEROGENEOUS NETWORKS

### ABSTRACT OF THE DISCLOSURE

There is provided a system for collaboratively delivering a video stream over a heterogeneous network. The video stream includes a plurality of frames. The system includes a session controller for synchronizing with client devices, receiving messages, and outputting encoder control commands based on the messages. The system further includes a plurality of encoders. Each encoder is dedicated to a corresponding one of the client devices for receiving user control commands from the corresponding one of the client devices that correspond to a playback of the video stream, outputting the messages based on the user control commands, and respectively controlling a transmission of the video stream to the corresponding one of the client devices using a shared timeline, including respectively and dynamically transmitting or discarding each of the plurality of frames so as to cooperatively maintain a minimum quality of service for all of the client devices.